

*Dr. Leslie Thorne Thorne's complaints -*  
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# The Administra- tion of the "Nau- heim" Treatment in England.



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## THE ADMINISTRATION OF THE "NAUHEIM" TREATMENT IN ENGLAND.

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THE fact, that the Nauheim treatment for diseases of the heart and circulation can be given in England with results as successful as those obtained at Nauheim, cannot be known too widely amongst the medical profession at the present time, for there is little doubt that it will not be possible to send patients to German or Austrian spas for some years to come. Under these circumstances, it is satisfactory to know that, as far as the balneological treatment of diseases of the heart and circulation is concerned, the administration of the treatment at home has proved in every way as efficacious, and the results obtained have been as good, as those following a visit to Nauheim.

For the last nineteen years, I have practised the administration of this treatment in London, and during this time I have treated a very large number of cases. This has afforded me many opportunities of comparing the results of a course of baths taken at Nauheim with those of a previous or subsequent course in London. It seems to me, therefore, that this is an opportune moment to give a short account of my observations, together with the histories of a few cases typically suitable for treatment by these methods.

There is no doubt whatever that the effects produced upon the heart and vessels by artificial Nauheim baths are identical with those obtained at the natural springs. I have carried out experiments both at Nauheim and in London, taking records before, during, and after various forms and strengths of baths, and the results have been practically identical in all cases.

The effect produced by immersion in a Nauheim bath upon a patient suffering from cardiac dilatation, raised blood-pressure, and the accompanying more or less degenerate and flabby

#### 4 THE "NAUHEIM" TREATMENT IN ENGLAND.

cardiac muscular tissues, is threefold:—

- (a) *All the cutaneous capillaries dilate.*—A fall in the blood-pressure is caused thereby, with consequent lessening of the resistance to be overcome by the cardiac contraction.
- (b) *The cardiac action is strengthened and its frequency diminished.*—This is a natural result of diminished cardiac strain, and can be illustrated by watching the pulse, which exhibits a larger volume and a slower rate, or by polygraphic tracings, taken before and after a bath.
- (c) *The cardiac conductivity is stimulated.*—In cases in which auricular or ventricular premature contractions are present, showing the existence of an impaired conductivity, such premature contractions often disappear or markedly decrease in frequency during a bath.

From the above, it will be seen that the results we obtain from a course of Nauheim baths are: a slower and stronger cardiac contraction, an improved cardiac conductivity, and a lessened resistance for the heart to overcome. These results are aimed at in all forms of treatment used for cases, exhibiting symptoms of overworked and failing cardiac contraction.

#### CASES SUITABLE FOR TREATMENT.

The selection of cases suitable for treatment is one of degree rather than of kind, and it is quite erroneous to suppose that the presence of valvular disease contraindicates treatment by the Nauheim methods. As will be seen from the examples given below, very great benefit may be obtained in patients suffering from valvular disease; not that the valvular defects themselves can be cured, but the cardiac dilatation, resulting from the overwork of a defective organ, can be greatly reduced, and in many cases cured for a long period. It is clearly obvious, given a case of mitral regurgitation, that regurgitation is increased, if the heart is dilated as well, and is reduced to a minimum, when the cardiac muscle is toned up and the dilatation reduced. Hence, many of the painful and dangerous symptoms, which are manifested in a



case of dilated, overworked heart with a defective valve, are greatly alleviated or entirely disappear during a course of Nauheim baths. My excuse for laying stress upon the above is, that I have often been told by medical men that they had been led to believe that the Nauheim treatment was of no good when valvular defect was present. I can only say that those responsible for this belief have had either a very unfortunate, or a very limited, experience of the treatment (Cases I. and III.).

Nearly all cases of dilated hearts with enfeebled, and sometimes degenerate, cardiac muscle tissue respond more quickly to this treatment than to any other, and it is particularly suitable for those in which a lengthy course of rest and cardiac tonics has failed to cure dilatation or relieve symptoms. The influenzal heart may be instanced as typical of this class of case.

The dilated, overworked heart, the result of a gouty constitution and an accompanying high arterial tension, derives great benefit from this treatment; the cardiac dilatation is relieved, the blood-pressure gradually drops, and the patient begins to feel the benefit almost from the first (Case IV.).

All cases of cardiac poisoning from diseases, such as enteric or malaria, or from drugs, such as tobacco, are greatly benefited by this treatment, as well as cases of heart-strain due to over-exertion in athletics or work.

The anæmic patient with a dilated heart, who derives no permanent benefit from iron or arsenic, often responds splendidly to a course of Nauheim baths, in conjunction with drug treatment. The irritable, nervous heart of the neurasthenic is often benefited by a course of treatment, but the results in these cases are not so satisfactory as in organic defects, such as dilatation from degenerate heart muscle and high blood-pressure, for the nervous heart is, in my opinion, one of the most unsatisfactory and difficult conditions to treat.

Cardiac conditions in which symptoms of a defective conductivity, such as constant auricular or ventricular premature contraction, are present, are greatly benefited by this treatment, the cardiac irregularities often disappearing during and after treatment (Cases I. and II.). Good results have been reported

in cases of heart-block of various degrees, but my own opinion is that many cases which have developed heart-block are not suitable for this treatment. Cases of auricular fibrillation are not suitable for the Nauheim treatment, but should be treated with large doses of digitalis to <sup>pro</sup>reduce heart-block.

Cases of chronic nephritis, exhibiting signs of cardiac dilatation, will often respond well to the treatment, the dyspnœa, cardiac pain, and orthopnœa disappearing during treatment. In these cases, the baths must be given warmer than usual, and no carbonated baths must be used. It is a common mistake to believe that a Nauheim bath is always a carbonated bath; this is quite *erroneous*, and is a fertile cause of failure and disappointment in treatment. No heart case is ever treated at Nauheim with *carbonated* baths at the commencement of the course, and a large percentage of the cases have the entire course of *still* baths. Many cardiac cases are only harmed by *carbonated* baths, but are greatly benefited by a course of *still* baths. No one should attempt to give Nauheim baths without carefully reading up the subject beforehand, and the custom of leaving the details, *i.e.*, length, strength, and temperature, to a nurse who professes to understand their preparation, cannot be deprecated too strongly.

It is not possible in a short article to give in detail a description of all cases which derive benefit from the Nauheim treatment, but the following examples are illustrative of its wide range of usefulness.

CASE I.—The patient, a man aged 57 years, was sent to me by Dr. W. H. Gregory of Beverley, who informed me that he was suffering from mitral regurgitation, cardiac dilatation, and muscle failure. He had been confined to his bed for eight weeks on account of palpitation, dyspnœa, insomnia, general weakness, and very intermittent pulse, and had improved to a certain extent, but for some time had been at a standstill. The patient had had rheumatic fever, accompanied by pericarditis and endocarditis, when he was 14 years of age. When I first saw him, he was very thin and weak, and could not walk many steps without having to sit down; he was distinctly cyanosed, and dyspnœa was present on slight exertion. His pulse was very small, and exhibited premature auricular contractions (Fig. 1); and he was unable to sleep without a narcotic, and suffered much from dyspepsia.

The area of absolute cardiac dullness extended from two inches to the right of the right border of the sternum to the left nipple line, the apex beat being just inside the left nipple line; a loud blowing systolic



murmur was heard all over the cardiac area, but was most intense at the apex, and was conveyed into the axilla. His blood-pressure was 75-125 mm. Hg. The case was undoubtedly one of cardiac dilatation, due to weakening of the myocardium and mitral regurgitation. He gradually improved under treatment, and before the end of the course of 25 baths, extending over five weeks, he had lost the dyspnœa, palpitation, and dyspepsia, could walk

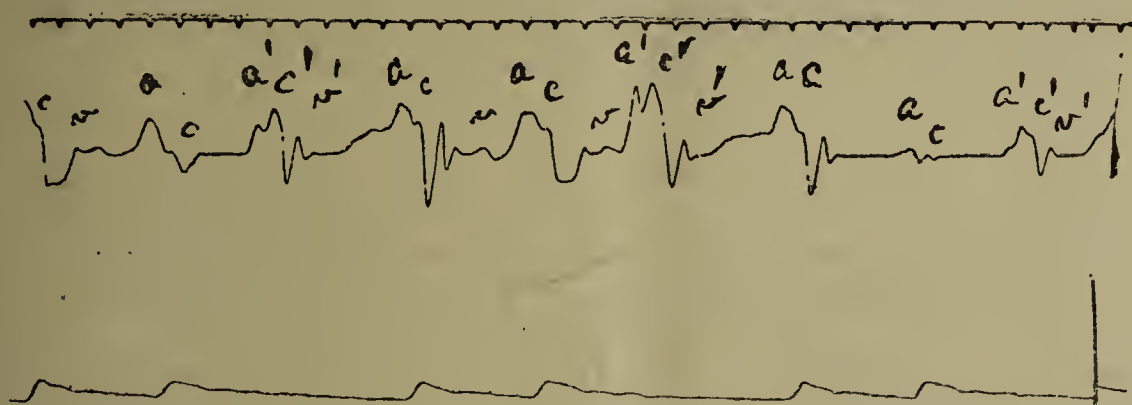


Fig. 1.—Polygraphic tracing of Case I. before treatment, showing a pulse of small volume exhibiting frequent premature auricular contractions (*a' c' v'*), two examples of which are shown, the *a-c* interval is normal. The premature contractions are not strong enough to produce any effect upon the radial pulse.

for a quarter of an hour to 20 minutes, and slept fairly well with a very occasional narcotic. His cardiac dullness had decreased to normal, extending from the left border of the sternum to two inches inside the left nipple, the systolic murmur was very much softer and much less diffuse. He returned home to Yorkshire, and was able to walk about his grounds with comfort, and to go up and down stairs, which he had not been able to do since the beginning of his illness.

I saw this patient five months after treatment, when he informed me that he could keep about all day, slept and ate well, and had no dyspepsia. His cardiac dullness was still absolutely normal, and the pulse was quite regular and of good volume (Fig. 2).

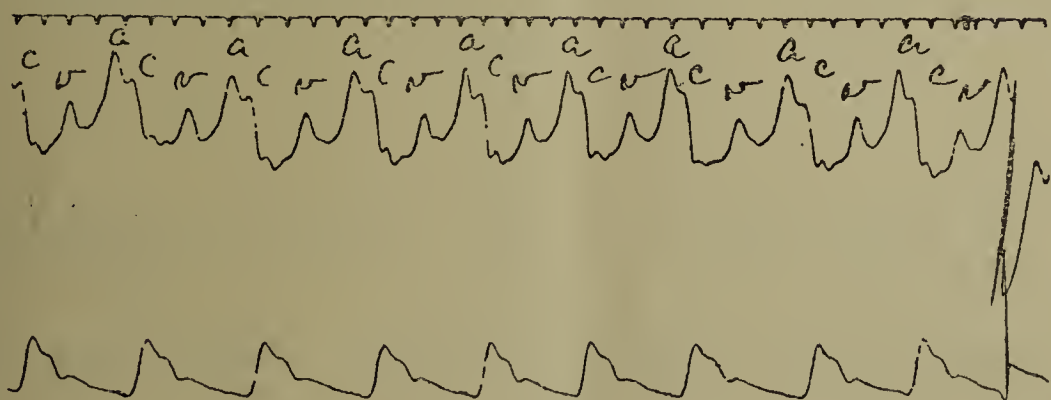


Fig. 2.—Polygraphic tracing of Case I. five months after treatment, showing a perfectly regular pulse of much improved volume. The *a-c* interval is normal, pulse-rate 68 per minute.

I saw the patient again seven months after treatment, he was still keeping quite well, the cardiac dullness was normal,

and the pulse was regular and of good volume (Fig. 3).

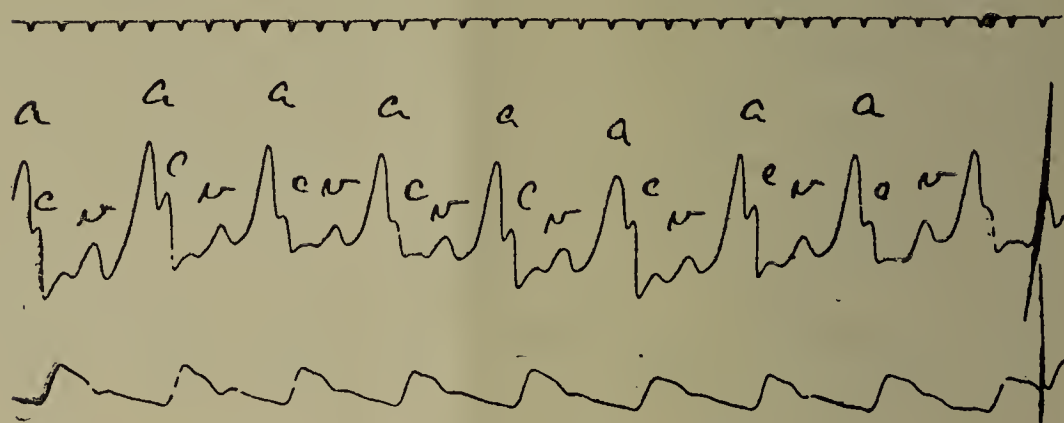


Fig. 3.—Polygraphic tracing of Case I. seven months after treatment, showing regular pulse of good volume, a-s interval normal, rate 70.

CASE II.—The patient, a man aged 46 years, had a severe attack of multiple abscesses, which was followed by a spell of very arduous work during the winter and spring. In the early summer, he began to suffer from general ill-health accompanied by constant cardiac irregularity which caused great discomfort and insomnia. Treatment with bromide and digitalis relieved him for a time, but as he found the relief only temporary, and was not able to do his work without great fatigue, he consulted me. I found him to be suffering from a very dilated and weakened heart exhibiting constant irregularities. The absolute cardiac dullness extended from an inch outside the right border of the sternum to the left nipple line, measuring at the level of the nipple six inches. The heart sounds were slapping at the apex, and scarcely audible at the base. The polygraphic tracing exhibited premature contractions of varying kinds, some auricular and some ventricular, but of so feeble a character that they did not reach the radial pulse (Fig. 4).

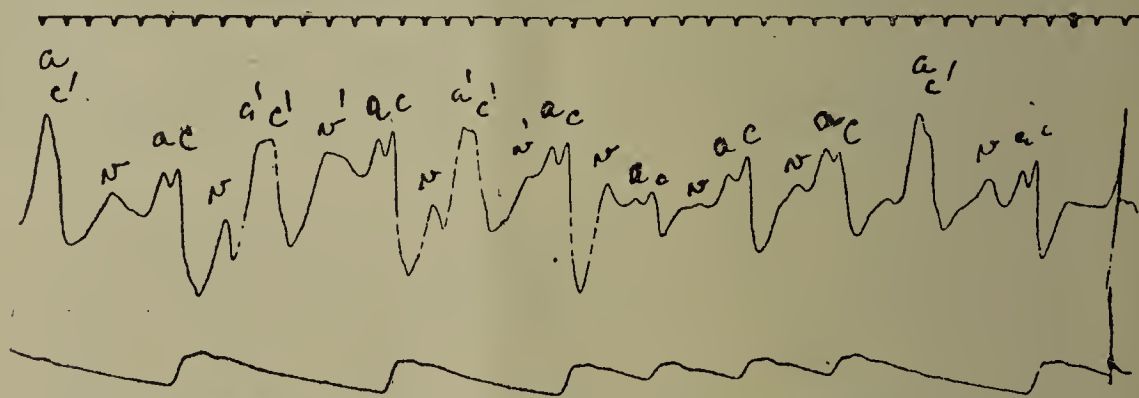


Fig. 4.—Polygraphic tracing of Case II. before treatment, showing auricular ( $a'$   $c'$   $v'$ ) and ventricular ( $c'$ ) premature contractions, and a pulse of poor volume.

I started him on a course of 20 baths, and after 8 of these his pulse became quite regular and of improved volume (Fig. 5). The cardiac dullness was less, and he felt much better.

After 20 baths he felt quite well, and slept well; the polygraphic tracing showed a regular pulse of good volume (Fig. 6). The area of cardiac dullness extended from the left border of the sternum to one and a half inches inside the left nipple, measuring four inches across. The sounds at the apex were natural, and those at the base could be well.



heard.

The patient went away intending to take a month's holiday. He indulged in a good deal of golf, and returned to London and work in

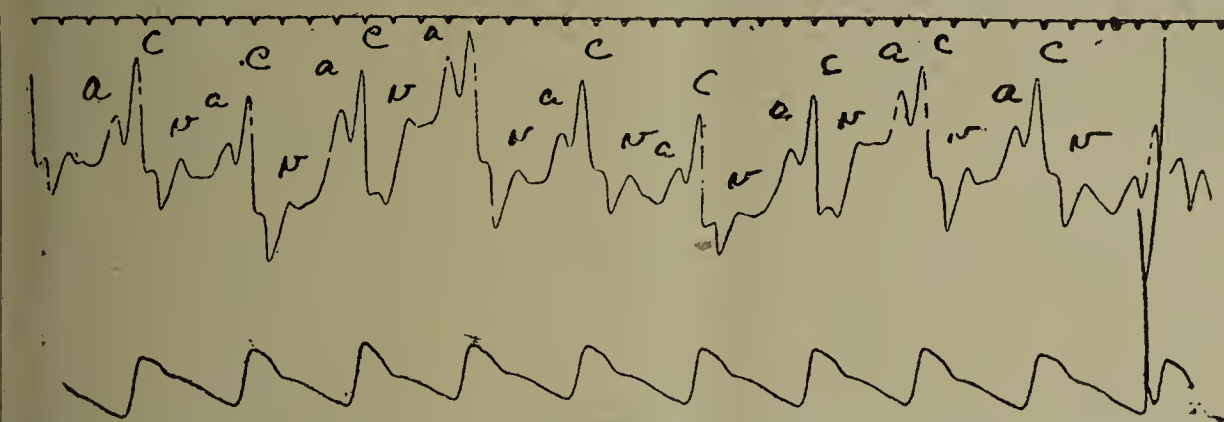


Fig. 5.—Polygraphic tracing of Case II. after 8 baths, showing a regular pulse of improved volume. Rate, 75 per minute.

10 days, but he was not really fit for work, and consequently had a relapse. After about 10 days' work, he was forced to take a month's rest, since when he has been perfectly well, and able to work hard and play golf.

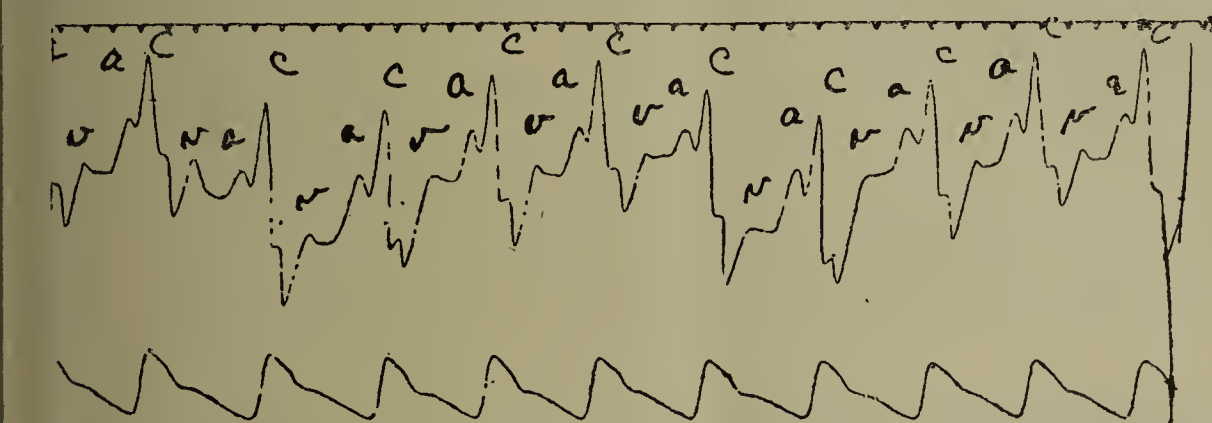


Fig. 6.—Polygraphic tracing of Case II. after 18 baths, showing regular pulse of good volume.

CASE III.—The patient, a man aged 41 years, was brought to me by Dr. Johns of Bournemouth. The history of the case is as follows:—Two years previously, he was suddenly seized with violent pains in the left side of the chest and left arm, accompanied by severe shortness of breath. These attacks increased in severity and frequency, despite various forms of treatment, and for over a year he had been an absolute invalid, unable to do anything for fear of bringing on an attack. He could scarcely eat anything, had very broken nights on account of the frequent recurrence of these attacks, and had lost a good deal of weight. The only treatment that alleviated the attacks was the use of amyl nitrite capsules, of which he was using 40 to 50 in the 24 hours, his attacks of pain coming on about every half hour. No definite cause could be discovered for his condition, except that he had been a fairly heavy drinker for years.

When Dr. Johns first brought him to see me, he looked very ill, was very anæmic and cyanosed, and suffered from dyspnœa, even whilst sitting still. He was very thin, and though a tall man, only weighed 9 stone 7 lbs. His pulse was 100 per minute, a typical pulse of aortic regurgitation, violent pulsation could be seen in the neck and in all vessels near



the surface, and his whole arm pulsated with each heart-beat; his blood pressure was 40-190 mm. Hg.

On examination of the chest, the impulse was seen to be general over the whole of the left front, and at the apex, 2 inches outside the left nipple line, it was very forcible and diffuse; the area of absolute cardiac dullness was exceedingly large, extending for  $2\frac{1}{2}$  inches to the right of the sternum to 2 inches to the left of the left nipple, and measuring 8 inches across on the nipple level. On auscultation, a loud double murmur could be heard over the aortic area, and a strong blowing systolic over the apex, conveyed into the axilla. He had two attacks of angina whilst in my consulting room. On each occasion he became very white, the dyspnœa was greatly increased, and the symptoms were not relieved till he had used a capsule of nitrite of amyl. He was undoubtedly suffering from a greatly dilated and hypertrophied heart, accompanied by double aortic disease, mitral regurgitation, and frequent attacks of angina pectoris. A polygraphic tracing of his pulse showed a rapid pulse, 93 per minute, and a decidedly increased a-c interval, indicating impaired cardiac conductivity (Fig. 7). The rounded apex to the radial pulse tracing was caused by the necessity of pressing the pen heavily upon the paper, in order to prevent the whole breadth being taken up by the violent movement of the radial curve.

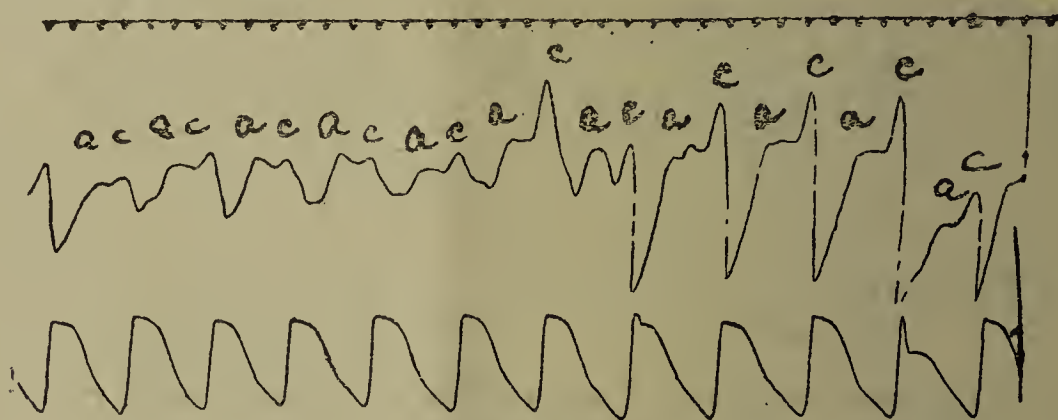


Fig. 7.—Polygraphic tracing of Case III. before treatment, showing decidedly increased a-c interval. Pulse, 88 per minute.

I explained to the patient that a course of Nauheim baths would most likely do him good, as anginal cases had been alleviated by them. I advised him to try them, for it was his last chance of relief, all other treatments having failed, but I pointed out that they would not cure him entirely, and that the good, so severe a case as his would get from the treatment, was uncertain. He decided, however, to try a course, for he said, that if he were on very long as he was, the pain and the insomnia would kill him. He started a course of baths, at which time he was using from 40 to 60 capsules of amyl nitrite in the 24 hours. He began to improve from the first, the attacks of angina decreasing in number and severity; after 19 days' treatment, during which time he had had 8 baths, he was only using 16-20 capsules in the 24 hours. After 19 baths, extending over a period of 25 days, he was sleeping and eating well, had put on 1 stone 10 pounds in weight, his weight being 10 stone 10 pounds, and he seldom used a capsule of amyl nitrite during the day, but still used from 6 to 8 during the night. His pulse was slower, 78 per minute, and the a-

interval was normal (Fig. 8).

The cardiac dullness was decidedly less, measuring 6 inches across at the level of the nipple, and extended from 1 inch to the right of the sternum to 1 inch to the left of the left nipple; the apex beat had come in as well, and was 1 inch outside the nipple line. Both the pulsation and the murmurs were much reduced in strength, and the maximum blood pressure was only 145 mm. Hg.

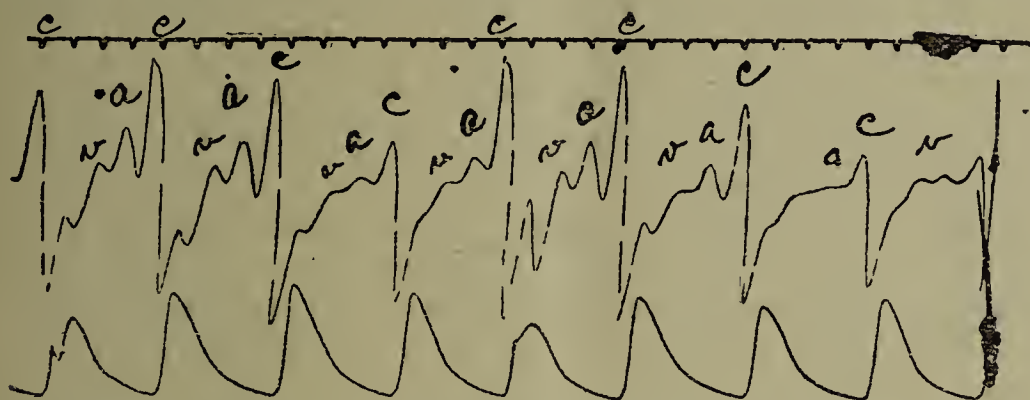


Fig. 8.—Polygraphic tracing of Case III. after treatment, showing slower pulse and normal a-c interval.

Two months after the patient had returned home, Dr. Johns wrote to me to say that he was very much better, and had given up taking amyl nitrite, as he never had an attack of angina, two months later he again wrote, as follows :—"Still more wonderful reports of our patient B.—He has now put on two stone in weight, sleeps well, eats well, has no pain, and the murmurs have changed in character, being much softer." This patient was so seriously ill, when I first saw him that I hardly expected the treatment to have so highly satisfactory a result.

CASE IV.—The patient, a man aged 63 years, was of a gouty constitution, and had been used to a good quantity of alcohol. He had a bad attack of influenza 15 months before I saw him, and had been failing in health ever since. For nine months, he had suffered from severe asthma and bronchitis, and had been kept to bed and a bath-chair; he had, in fact, been told to buy a bath-chair and a carrying chair, for there was little chance of his being well enough to walk again. When I first saw the patient, he looked ill, and was very cyanosed and short of breath; said he could neither eat nor sleep, having to be propped up at night, and suffered greatly from depression. He was puffy under the eyes, the pulse was 108 per minute, and exhibited constant irregularities, the result of premature ventricular

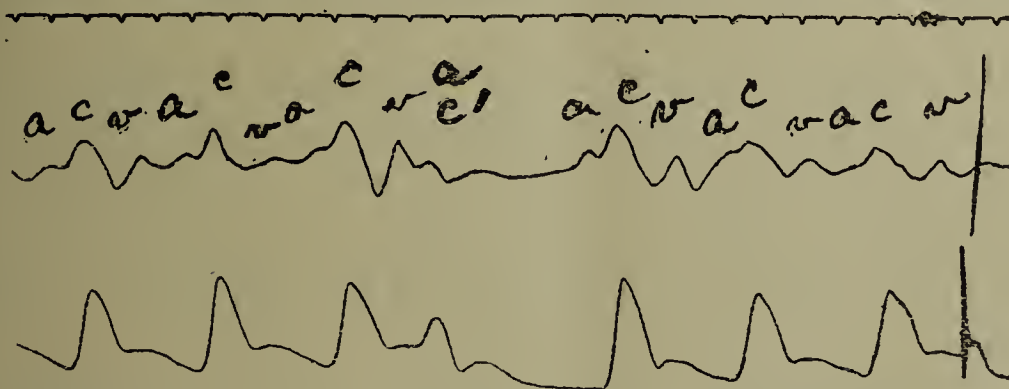


Fig. 9.—Polygraphic tracing of Case IV. before treatment, showing an example of premature ventricular contraction (c').



contractions. The heart was very dilated, the area of absolute cardiac dullness measuring six and a half inches across at the nipple level and extending two inches to the right of the sternum, the apex beat was just in the left nipple line, and the heart sounds were very feeble. The arteries were thickened and tortuous, the blood-pressure was 80-150 mm. Hg., and his liver dullness extended from two inches above the normal to an inch below the costal arch. I gave this patient a course of 25 Nauheim baths extending over a period of five weeks. After three weeks' treatment, he was so much improved that he could walk from a mile to a mile and a half, and therefore sold his bath-chair and carrying chair. At the end of the treatment, he slept and ate well, had no dyspnœa or orthopnœa, and could walk two or three miles with comfort. His heart sounds were much stronger, his cardiac dullness was normal, extending from one inch and a half inside the left nipple to the left border of the sternum; the apex beat was one inch inside the left nipple line, and the liver dullness had decreased by two inches. The pulse was of better volume and perfectly regular in time, 60 per minute (Fig. 10), and the blood pressure had fallen to 70-125 mm. Hg.

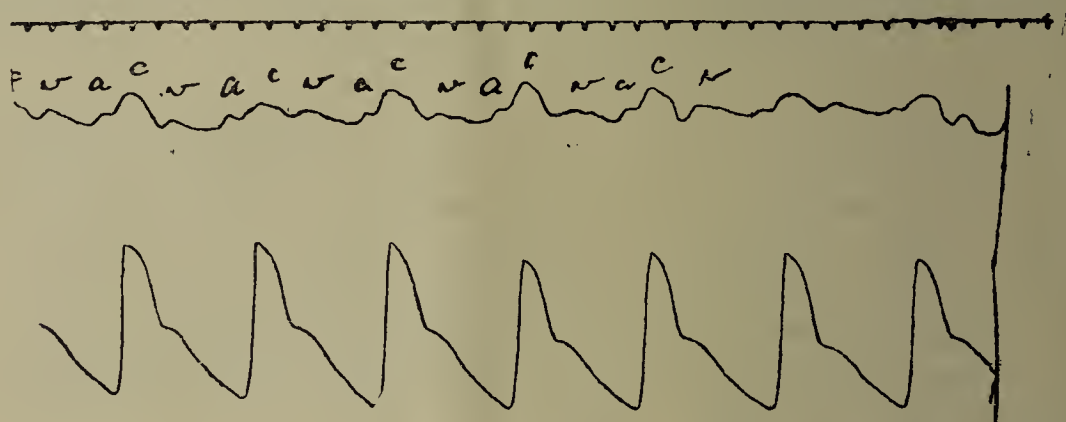


Fig. 10.—Polygraphic tracing of Case IV. after treatment, showing regular pulse of better volume and slower time, 60 per minute.

A month after treatment, this patient went to Australia, his native country, and wrote home from there, just a year after treatment, to tell me he was perfectly well, and able to enjoy long walks.

#### CONCLUSIONS.

1. The "Nauheim" treatment can be given in England with results quite as satisfactory as those obtained at Nauheim.

2. In many cases, when treatment by rest and heart tonics has failed to give relief, it has proved successful.

3. In cases of valvular defects, with weakened and dilated myocardium, it is quite as successful in reducing dilatation and relieving symptoms as in uncomplicated cases of myocardial weakness.

4. The use of carbonated baths in the early stages of the treatment is, in most cases, harmful.





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